



August 19, 2016

GMT2 Scoping Comments  
Bureau of Land Management  
22 West 7<sup>th</sup> Ave, Stop #13  
Anchorage, AK 99513

**Re: Scope of SEIS for Proposed GMT2 Development Project**

Dear Bureau of Land Management (BLM):

Thank you for this opportunity to comment on the scope of the supplemental environmental impact statement (SEIS) for the Alpine Satellite Development Plan for the Proposed Greater Mooses Tooth Development Project in Alaska (GMT2). The Sabin Center for Climate Change Law submits the following recommendations on the scope of issues that should be evaluated in the SEIS:

- (1) **Effects of climate change on the GMT2 well site and its affected environment:** The SEIS should consider effects of the rapidly changing Alaskan climate, most importantly thermokarst and resulting changes to permafrost, as well as implications of those changes for project activity.
- (2) **Scope of emissions:** The SEIS should include an inventory of both direct and indirect greenhouse gas (GHG) emissions from oil and gas that is produced from the GMT2 well site, including all downstream emissions from transportation, processing, and end-use of the oil and gas.
- (3) **Social cost of GHG emissions:** The SEIS should use the federal social cost of carbon (SCC) and other available tools to assign a cost value to the impacts of the inventoried emissions, including non-CO<sub>2</sub> GHG emissions.
- (4) **Effect of oil and gas production on our ability to meet GHG targets:** The SEIS should consider how the authorization of additional oil and gas production will affect our ability to attain national and international GHG reduction targets.

These recommendations are discussed in greater detail below.

**1. The SEIS should consider how climate change will affect the GMT2 well site and its affected environment in order to accurately assess the proposal’s environmental impacts.**

As the Council on Environmental Quality has recently explained, the National Environmental Policy Act (NEPA)’s requirement that federal agencies evaluate impacts of their actions obliges them to consider not only whether and how a project affects the environment and global climate but also how the changing climate can be expected to affect the project.<sup>1</sup> In the GMT2 project study area, where climate change has given rise to supernormal warming—termed “arctic amplification”—this obligation is especially important.

The GMT1 SEIS gave due consideration to the impacts of climate change on the relevant project study area. The GMT2 SEIS, which has the benefit of more up-to-date data on key factors of changes to the regional climate, should similarly take note of the effects of climate change on this project’s study area. As the GMT1 SEIS noted, permafrost is a dominant feature of the landscape.<sup>2</sup> It follows that this project’s SEIS should pay particular attention to how thawing permafrost could affect project installations and activities, and also on the impacts of project activities on local soils and hydrology amid increasingly warmer conditions.

**2. The GHG inventory should include indirect (downstream) emissions from the transportation, processing, and end-use of oil and gas.**

We recommend that BLM prepare an inventory of all direct and indirect GHG emissions from oil and gas produced at the GMT2 well site, including downstream emissions from the transportation, processing and end-use of produced oil and gas. The inventory should clearly delineate estimated emissions from different parts of the oil and gas supply chains and different emission sources. The information should also be presented in a way that is clear and accessible to decision-makers and the public – for example, readers should be able to easily determine the proportion of emissions that is attributable to a particular activity or source category, and compare emissions across different production scenarios.

Including downstream emissions in the inventory is consistent with the requirements of the National Environmental Policy Act (“NEPA”), as they have been interpreted by the Council on Environmental Quality (“CEQ”) and federal courts. NEPA requires agencies to evaluate both direct and indirect environmental effects from projects. Indirect effects are “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.”<sup>3</sup> Such

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<sup>1</sup> CEQ, *Final Draft Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Review*, 4 (Aug. 5, 2016), available at [https://www.whitehouse.gov/sites/whitehouse.gov/files/documents/nepa\\_final\\_ghg\\_guidance.pdf](https://www.whitehouse.gov/sites/whitehouse.gov/files/documents/nepa_final_ghg_guidance.pdf).

<sup>2</sup> U.S. Department of the Interior, Bureau of Land Management, Final Environmental Impact Statement for the Alpine Satellite Development Plan for the Proposed Greater Mooses Tooth One Development Project, DOI-BLM-AK-0000-2013-0001-EIS, BLM/AK/PL-15/002+5101+AK9300, vol. 1, at 119 (Oct. 2014); see also Dmitry A. Streletskiy et al., *Permafrost, Infrastructure, and Climate Change: A GIS-Based Landscape Approach to Geotechnical Modeling*, 44 *Arctic, Antarctic, & Alpine Research* 368, 375 (2012) (estimating that permafrost bearing capacity in the North Slope of Alaska has fallen by 22% since 1980 and that, by 2040, it will have fallen by 50%).

<sup>3</sup> 40 C.F.R. § 1508.8(b)

effects include “growth inducing effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.”<sup>4</sup> The NEPA regulations also specify that the scope of the EIA should encompass “connected actions” including any actions that cannot or will not proceed unless other actions are taken previously or simultaneously” and actions that are “interdependent parts of a larger action and depend on the larger action for their justification.”<sup>5</sup>

CEQ has issued final guidance explaining how this requirement should apply to GHG emissions. The guidance states that NEPA analysis should include “emissions from activities that have a reasonably close causal relationship to the Federal action, such as those that may occur as a predicate for the agency action and as a consequence of the agency action.”<sup>6</sup> To illustrate this point, the guidance notes that: “NEPA reviews for proposed resource extraction and development projects typically include the reasonably foreseeable effects of various phases in the process, such as clearing land for the project, building access roads, extraction, transport, refining, processing, using the resource, disassembly, disposal, and reclamation.”<sup>7</sup> Moreover, the guidance explicitly notes that the scope of indirect effects from a federal lease sale of coal for energy production would include emissions from the combustion of the coal.<sup>8</sup> It also directs agencies to a study of lifecycle GHG emissions from coal and natural gas as an example of the type of resource that should be used to evaluate indirect emissions.<sup>9</sup>

CEQ’s interpretation of NEPA is entitled to substantial deference.<sup>10</sup> It is also consistent with federal case law, including several cases holding that GHG emissions from coal combustion are an indirect effect of coal production.<sup>11</sup> These cases have held that the production of coal causes additional coal consumption, and that emissions from the additional coal combustion are reasonably foreseeable and quantifiable.<sup>12</sup> There have not yet been any decisions involving an agency’s obligation to evaluate end-use emissions in the context of an action that involves oil and gas production, but courts would likely reach the same conclusion in this context: more oil and gas production will lead to more oil and gas use, and as illustrated in the EISs cited below, tools are available to estimate the emissions from the end-use of oil and gas.

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<sup>4</sup> *Id.*

<sup>5</sup> 40 C.F.R. § 1508.25(a)(1).

<sup>6</sup> CEQ Final Guidance, *supra* note 1, at 13.

<sup>7</sup> *Id.* at 14.

<sup>8</sup> *Id.* at 16, FN 42.

<sup>9</sup> *Id.* at 16, FN 43.

<sup>10</sup> *Robertson v. Methow Valley Citizens Council* (1989) 490 U.S. 332, 355 (1989) (CEQ regulations entitled to “substantial deference”); *Andrus v. Sierra Club*, 442 U.S. 347, 358 (1979) (same).

<sup>11</sup> *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174 (D. Colo. 2014) (USFS must consider downstream emissions from coal combustion); *Dine Citizens Against Ruining Our Env’t v. U.S. Office of Surface Mining Reclamation & Enf’t*, 82 F. Supp. 3d 1201 (D. Colo. 2015) (OSM must consider downstream emissions from coal combustion); *WildEarth Guardians v. U.S. Office of Surface Mining, Reclamation & Enf’t*, 104 F. Supp. 3d 1208, 1230 (D. Colo. 2015) (OSM must consider downstream emissions from coal combustion); *Wildearth Guardians v. U.S. Office of Surface Mining, Reclamation & Enf’t*, No. CV 14-103-BLG-SPW, 2015 WL 6442724 (D. Mont. Oct. 23, 2015) report and recommendation adopted in part, rejected in part sub nom. *Guardians v. U.S. Office of Surface Mining, Reclamation & Enf’t*, No. CV 14-103-BLG-SPW, 2016 WL 259285 (D. Mont. Jan. 21, 2016) (OSM failed to take hard look at environmental impacts when issuing FONSI, including downstream GHG emissions).

<sup>12</sup> *Id.*

There are also not yet any decisions regarding an agency's obligation to evaluate emissions from the transportation or processing of fossil fuels in the context of a proposal that involves fossil fuel production, but the Ninth Circuit held that NEPA required analysis of conventional air pollutants from the transportation and processing of gold ore as indirect effects of a gold mine where there was sufficient information about the transportation route and processing activities to generate a reasonable estimate of those emissions.<sup>13</sup>

Demonstrating that such analysis is feasible, many federal agencies (including BLM) have begun to account for downstream emissions in their NEPA reviews. For example, the United States Forest Service ("USFS") conducted a life cycle assessment for an oil and gas leasing decision in 2013, which quantified emissions from transport, refining, and end-use.<sup>14</sup> In 2015, USFS prepared a revised DPEIS for the Colorado Roadless Rule coal mining exemptions that included a much more detailed analysis of GHG emissions from mining, transportation (both within the U.S. and to overseas markets) and combustion.<sup>15</sup> BLM also recently published an EIS in which it acknowledged that "the burning of the coal is an indirect impact that is a reasonable progression of the mining activity"<sup>16</sup> and quantified emissions from combustion.<sup>17</sup>

The NEPA documents cited above suggest that the preparation of a downstream emissions inventory is a relatively straightforward task, and that tools and data are available to estimate emissions from each different phase of the oil and gas supply chains.<sup>18</sup> The more challenging task is to determine how these emissions differ from a theoretical "no action" baseline – the idea being to calculate the incremental (or net) impact of agency action on GHG emissions. (This type of analysis has not been required by the courts, but it has been upheld.<sup>19</sup>) To calculate net impact, agencies typically use a model to determine what energy sources would be substituted for the federal resource if it were not produced (e.g., non-federal coal, oil and gas, renewables, energy efficiency, and energy conservation) and then estimate the supply chain emissions for the substitute energy sources.

We have two recommendations for BLM in regards to a net impact analysis. First, BLM should disclose gross emissions as well as net emissions and all underlying assumptions in the draft

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<sup>13</sup> *S. Fork Band Council Of W. Shoshone Of Nevada v. U.S. Dep't of Interior*, 588 F.3d 718, 725 (9th Cir. 2009).

<sup>14</sup> U.S. FOREST SERV., RECORD OF DECISION AND FINAL ENVIRONMENTAL IMPACT STATEMENT, OIL AND GAS LEASING ANALYSIS, FISHLAKE NATIONAL FOREST 169 (Aug. 2013) (Table 3.12-7: GHG emissions from transportation, offsite refining and end-use are 299,627 MT CO<sub>2</sub>e; total direct and indirect emissions are 365,336 MT CO<sub>2</sub>e). *See also id.*, Appendix E/SIR-2 (more detailed calculations of direct and indirect emissions).

<sup>15</sup> U.S. FOREST SERV., RULEMAKING FOR COLORADO ROADLESS AREAS, SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (Nov. 2015) at 33.

<sup>16</sup> BUREAU OF LAND MGMT., FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FOR THE LEASING AND UNDERGROUND MINING OF THE GREENS HOLLOW FEDERAL COAL LEASE TRACT, UTU-84102, 287 (Feb. 2015).

<sup>17</sup> *Id.* at 286.

<sup>18</sup> For example, BLM can estimate emissions from the combustion of coal by multiplying the amount of coal to be produced by the emissions factor for that type of coal. BLM could also adjust its estimates of future emissions to account for the installation of carbon capture and sequestration (CCS) technology at coal-fired power plants. To do so, BLM should use two or more scenarios that reflect varying levels of CCS deployment.

<sup>19</sup> *See, e.g., Mayo Foundation v. Surface Transportation Board*, 472 F.3d 545, 556 (8th Cir. 2006) (finding that, in the downstream emissions analysis for a coal railway, it was appropriate to rely on an assumption that "not all of the... transported coal would represent new combustion, that some would simply be a substitute for existing coal supplies").

SEIS. This will make it easy for the public to comment on the integrity and accuracy of the analysis. Second, BLM should use a reference case that corresponds with a scenario where the United States meets its GHG reduction targets. This is important because the choice of reference case determines the outcome of the analysis: in a scenario where we exceed the GHG targets, a larger proportion of the foregone federal coal production will be substituted by other coal and fossil fuel resources (as opposed to renewables or energy efficiency), and thus the net GHG impact of federal coal production will appear to be smaller.<sup>20</sup>

### 3. The SEIS should account for the costs of GHG emissions.

We recommend that BLM use the federal Social Cost of Carbon (SCC) and other available tools to assign a cost value to both direct and indirect GHG emissions—or a benefit value to avoided GHG emissions—that will occur as a result of oil and gas produced from the GMT2 well (including the downstream emissions described in Section 2 of these comments).<sup>21</sup> This information should be used to evaluate whether the GMT2 well should be approved, and whether a carbon price should be incorporated into the rental fees or royalty rates for the well.

If BLM conducts a cost-benefit analysis for the proposed action in which it assigns a monetary value to economic benefits and other environmental harms, then BLM is legally required to assign a monetary value to GHG emissions.<sup>22</sup> But even if BLM does not conduct a complete cost-benefit analysis, it would be helpful to decision-makers to use a monetary value as a tool for disclosing the impacts of GHG emissions, because such estimates provide a better sense of the scale of GHG impacts and the value of emissions reductions. As noted above, such estimates can also inform decisions about rental fees and royalty rates.

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<sup>20</sup> To illustrate this point: the Bureau of Ocean Energy Management (BOEM) used the Energy Information Agency (EIA)'s 2015 Reference Case to calculate future demand for oil and gas in the United States when the incremental GHG impacts of the proposed 2017-2022 Outer Continental Shelf (OCS) Leasing Program. The EIA 2015 Reference Case does not account for present and future actions aimed at reducing fossil fuel consumption in the United States, such as the Clean Power Plan, and reflects a scenario in which we would completely fail to meet our domestic and international GHG reduction targets (under the Reference Case, the U.S. will have 445% higher GHG emissions than the level we committed to in our INDC). Because it relied on this Reference Case, BOEM predicted that the demand for oil and gas would remain strong in future years and that it would actually reduce emissions slightly to produce oil and gas closer to home. Thus, “BOEM is dismissing the climate impact of drilling for fossil fuels... because its model assumes we will not act on climate and will accept a catastrophic level of climate change.” See Lorne Stockman, *Government Assumes U.S. Will Fail Climate Goals in Its 5-Year Offshore Drilling Proposal* (2016), <http://priceofoil.org/content/uploads/2016/04/5YearPlan-ClimateTest.pdf>.

<sup>21</sup> The SCC is a tool developed by the federal government to estimate the costs of GHG emissions that are either released or avoided as a result of agency rulemakings. It provides a comprehensive estimate of climate change damages, including changes in net agricultural productivity, human health, property damages from increased flood risk, and changes in energy system costs. For more details, see EPA, *The Social Cost of Carbon*, <https://www3.epa.gov/climatechange/EPAactivities/economics/scc.html>. There is also a peer reviewed methodology that can be used to calculate the social costs of methane and nitrous oxide, which has been used by EPA in prior rulemakings. See Marten et al., *Incremental CH<sub>4</sub> and N<sub>2</sub>O Mitigation Benefits Consistent with the US Government's SC-CO<sub>2</sub> estimates*, 15 CLIMATE POLICY 272 (2015); EPA, REGULATORY IMPACT ANALYSIS OF THE PROPOSED EMISSION STANDARDS FOR NEW AND MODIFIED SOURCES IN THE OIL AND NATURAL GAS SECTOR, 4-14 (2015); EPA, REGULATORY IMPACT ANALYSIS FOR THE PROPOSED REVISIONS TO THE EMISSION GUIDELINES FOR EXISTING SOURCES AND SUPPLEMENTAL PROPOSED NEW SOURCE PERFORMANCE STANDARDS IN THE MUNICIPAL SOLID WASTE LANDFILLS SECTOR, 4-10–4-14 (2015).

<sup>22</sup> See *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1200 (9th Cir. 2008); *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1190-91 (D. Colo. 2014).

#### 4. The SEIS should consider how additional oil and gas production will affect our ability to attain GHG reduction targets.

The regulations implementing NEPA require federal agencies to consider whether a proposed action is consistent with the objectives of federal, regional, state and local land use plans, policies and controls.<sup>23</sup> Based on this requirement, CEQ’s final guidance on NEPA and climate change instructs agencies to provide a frame of reference for decision-makers by disclosing the extent to which a project’s GHG emissions are consistent with federal, regional, state, tribal and local climate change plans, policies, and laws for GHG emission reductions.<sup>24</sup> BLM should therefore consider whether the additional production of oil and gas from the GMT2 well will facilitate or interfere with the attainment of the emission reductions specified in those plans, policies, and laws.

As part of our participation in the Paris Agreement to the United Nations Framework Convention on Climate Change (UNFCCC), we have stated that we intend to reduce our economy-wide GHG emissions by 26-28% below 2005 levels by 2025, which will put us on a trajectory to achieve emission reductions of 80% or more by 2050.<sup>25</sup> To achieve this, we must lower annual emissions to 5,460 – 5,312 MtCO<sub>2</sub>e by 2025 (a reduction of 1,410 – 1,558 MtCO<sub>2</sub>e over 2014 levels).<sup>26</sup> Even with the Clean Power Plan and other existing regulations, the U.S. is not yet on track to achieve these reductions—additional measures will be needed to meet the 2025 target.<sup>27</sup>

This short term emissions reduction target is part of a broader commitment on the part of the U.S. and the 177 other signatories of the Paris Agreement to limit global warming to “well below” a 2 °C increase above pre-industrial temperatures, and seek to limit it to 1.5 °C.<sup>28</sup> The only way to achieve this goal is to refrain from extracting and using the majority of the planet’s known fossil fuel reserves.<sup>29</sup> President Obama cited this need to keep fossil fuels in the ground as one of the reasons for rejecting the Keystone Pipeline.<sup>30</sup>

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<sup>23</sup> 40 C.F.R. § 1502.16(c). *See also* 40 C.F.R. § 1506.2(d) (where there is an inconsistency with state or local plans or laws, the statement “should describe the extent to which the agency would reconcile its proposed action with the plan or law”).

<sup>24</sup> CEQ, *Final Draft Guidance* at 28-29.

<sup>25</sup> UNITED STATES, INTENDED NATIONALLY DETERMINED CONTRIBUTION, SUBMISSION TO THE UNFCCC SECRETARIAT (2015), <http://www4.unfccc.int/submissions/indc/Submission%20Pages/submissions.aspx>.

<sup>26</sup> These figures are based on the EPA GHG inventory estimates for 2005 GHG emissions and 2014 emissions (which were used as a baseline for current emissions, since these are the most recent estimates). EPA, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990-2014 (2016).

<sup>27</sup> C2ES, *Achieving the United States’ Intended Nationally Determined Contribution* (June 2015), <http://www.c2es.org/docUploads/achieving-us-indc.pdf>.

<sup>28</sup> *Paris Agreement, Article 2*, FCC/CP/2015/L.9 (Dec. 12, 2015).

<sup>29</sup> Christophe McGlade & Paul Ekins, *The Geographical Distribution of Fossil Fuels Unused When Limiting Global Warming to 2 °C*, 517 NATURE 187 (2015) (regional estimates of unburnable reserves were based on an “economically optimal” distribution).

<sup>30</sup> Statement by the President on the Keystone XL Pipeline (Nov. 6, 2015), <https://www.whitehouse.gov/the-press-office/2015/11/06/statement-president-keystone-xl-pipeline> (“ultimately, if we’re going to prevent large parts of this Earth from becoming not only inhospitable but uninhabitable in our lifetimes, we’re going to have to keep some fossil fuels in the ground rather than burn them and release more dangerous pollution into the sky”).

BLM should evaluate how oil and gas production from the GMT2 well will affect our ability to meet our federal targets and commitments before deciding how to proceed with the project. It should also consider whether there are regional, state, tribal or local GHG emission reduction targets that should be accounted for in the consistency analysis.

## 5. Conclusion

Climate change is one of the most important considerations for any fossil fuel production project. And for projects sited in particularly vulnerable locations such as Alaska, the effects of climate change can also have important implications for the project's environmental impacts. We thus recommend that BLM pay close attention to both the effects of climate change on the proposed action and the effects of the proposed action on climate change. This means evaluating the effects on roads, soils, hydrology, and project activities and installation of temperatures well outside the historical norm but clearly predicted by recent trends. With respect to GHG emissions, we recommend that BLM prepare a comprehensive inventory of all direct and indirect GHG emissions, including downstream emissions, assign a cost value to these emissions, and to use this information to evaluate the extent to which federal coal production is consistent with our GHG reduction targets.

We appreciate this opportunity to comment on the scope of the SEIS. Please do not hesitate to contact us with any questions about these recommendations.

Sincerely,



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